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Article (Accepted Version)

Becares, Laia (2020) Health and socio-economic inequalities by sexual orientation among older women in the United Kingdom: findings from the UK Household Longitudinal Study. Ageing and Society. pp. 1-31. ISSN 0144-686X

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Health and socioeconomic inequalities by sexual orientation among older women in the UK: Findings from the UK Household Longitudinal Study

Abstract

Lesbian, gay, bisexual, and queer (LGBQ) women living in the UK experience worse health than their heterosexual peers throughout their lives, but less is known about health inequalities in older age. This study uses population-level data to examine inequalities among LGBQ older women and women who prefer not to disclose their sexuality, compared to heterosexual women.

Analyses use data from women aged 50 and older who were active in waves 3 and 7 of Understanding Society (n=8209) to examine inequalities in socioeconomic conditions, health, and alcohol consumption across sexual orientation groups.

LGBQ older women are on average younger and have higher socioeconomic resources than their heterosexual peers. In contrast, women who prefer not to disclose their sexual orientation are older and have the lowest income and educational qualifications. Results of the health inequalities analyses show that LGBQ older women are almost twice as likely as heterosexual older women to engage in harmful alcohol consumption. Older women who prefer not to disclose their sexuality have worse physical and mental health than heterosexual older women. The health LGBQ older women, and women who prefer not to disclose their sexual orientation, are one of the most neglected research areas in UK gerontology. Findings of this study contribute to our understanding of their social and health circumstances, and illuminate methodological limitations in existing data.

Keywords: UK; sexual orientation; women; ageing; inequalities; mental health; physical health; alcohol use.

Introduction

Lesbian, gay, bisexual, and queer women (hereon, sexual minority women) living in the UK experience worse health than their heterosexual peers throughout their lives. During the early life course, young sexual minority women are more likely than young heterosexual women to smoke (Hagger-Johnson *et al.* 2013). During adulthood they are at increased risk of being overweight or obese (Semlyen, Curtis and Varney 2019), and are more likely to have poor mental health (Elliott *et al.* 2014, King *et al.* 2003, King and Nazareth 2006, Semlyen *et al.* 2016), misuse alcohol (King, McKeown, Warner, Ramsay, Johnson, Cort, Wright, Blizzard and Davidson 2003, King and Nazareth 2006, Mercer *et al.* 2007, Shahab *et al.* 2017), smoke (King and Nazareth 2006, Mercer, Bailey, Johnson, Erens, Wellings, Fenton and Copas 2007, Shahab, Brown, Hagger-Johnson, Michie, Semlyen, West and Meads 2017), and report poorer self-rated health (Elliott, Kanouse, Burkhart, Abel, Lyratzopoulos, Beckett, Schuster and Roland 2014). Much less is known about health inequalities and their underlying social determinants in the later stages of the life course. A non-probability based online survey of sexual minority people over the age of 55 showed that older sexual minority women in the UK drink alcohol more often than older heterosexual women (Guasp 2011), but information on inequalities among older sexual minority women across other health and social outcomes, and/or from population-based studies, is lacking. This is a concerning knowledge gap because population-based health statistics play a key role in informing the prioritisation of public health and social care investment, and information on the existence of inequalities in health and social indicators across sexual orientation groups provides an important baseline to identify and address unfair and unjust inequities. At stake are successful health and social care promotion initiatives targeted at sexual minority women; studies have highlighted the need for a pro-active agenda for sexual minority

women's health which addresses the creation of systemic institutional change to improve the health and social conditions of sexual minority women, and the care they receive (Fish and Anthony 2005), and all of these actions need to be evidence-based.

In addition to the limited availability of suitable data, a related culprit behind the lack of information on health inequalities among older sexual minority women is the 'invisibility' of this population in the fields of epidemiology, sociology, and gerontology (Traies 2015). As argued by Kehoe (Kehoe 1986) and Deevey (Deevey 1990), older sexual minority women embody, at the very least, three intersecting systems of oppression (sexism, heterosexism, and ageism) that result in their marginalisation, disempowerment, and subsequent exclusion from academic and policy discourses. The invisibility of older sexual minority women is further exacerbated by their own active hiding (Traies 2016). The fact that so many older sexual minority women are still wholly or partially 'in the closet' is often given as the reason why so little research into this group exists and why gay men are still more likely to be the subject of non-heterosexual ageing research (Traies 2016).

A related limitation present in UK gerontology is the omission from analyses of individuals who select 'prefer not to say' as a response category when asked about their sexual orientation. US studies show that concealment and non-disclosure of sexual orientation may contribute to poorer mental health (Hatzenbuehler 2009, Meyer 2003, Pachankis 2007) and greater internalised homophobia (Lewiset *al.* 2003, Wright and Perry 2006), which reflects dominant discourses about sexual minority identity that position coming out of the closet as positive and healthy, and staying in the closet as harmful (McLean 2007). Learning more about the health and social circumstances of this group of older women who prefer not to disclose their sexuality is

important in order to understand the health of all women who self-report a sexual identity other than heterosexual.

Although there is a growing body of quantitative research examining the life experiences and health conditions of older sexual minority women in North America, there has been a comparatively much smaller quantitative research exercise in the UK. The current cohorts of UK older sexual minority women have lived through highly sexist, heterosexist, and homophobic historical and social contexts, and it is important to understand, at a population-level, how these multiple systems of oppressions that older sexual minority women have lived through intersect, and how they are embodied in their health and ageing processes in older life. The present study aims to address these gaps in the literature by examining inequalities in the health and social circumstances of UK sexual minority women aged 50 and older, compared to heterosexual women of the same age, using a nationally-representative survey.

Conceptual Framework

This study is situated within a conceptual framework which draws from the life course theory (Dannefer 2003, Elder 1994), the Health Equity Promotion Model (Fredriksen-Goldsen *et al.* 2014), and intersectionality theory (Bowleg 2012, Crenshaw 1993, McCall 2005). It considers the impact on health of the life course accumulation of experiences of otherness, exclusion, and marginalisation at the intersection of age, sex, and sexuality, while recognising the positive and health-protective effects found in the lives of older sexual minority women. According to a life course perspective that captures the influence of social structures and historical conditions on health (Elder 1994), the socio-historical context that older sexual minority women have lived through is key to understanding their current health, ageing processes, and social circumstances. People born in different time periods and socio-historical contexts live their lives being exposed

to different barriers, opportunities, and oppressions (Elder 1994). This interplay of human lives and historical times is particularly relevant to understand the health and socioeconomic circumstances of older sexual minority women who have lived their formative and mid-life years through a significant history of oppression due to, at least, their gender and sexuality. Women born before 1970, the birth years of people aged 50 and older in 2019, have been subject to political exclusion throughout their lives, including lack of legal employment protections in the workplace, same-sex marriage rights, and other challenges related to overt structural and interpersonal discrimination. Although female homosexuality has never been criminalised in England, it was socially considered as morally wrong (Traies 2016), and it was officially classified as a mental disorder by the World Health Organisation until 1990 (Cochran *et al.* 2014). Parallel to the narrative of pride and liberation that emerged from the Stonewall Riots in 1969 and the formation of the UK Gay Liberation Front in 1970, experiences of discrimination and oppression of gay and lesbian populations continued through structural and individual actions. This included, for example, legislation under Section 28 of the Local Government Act of 1988 introduced by the Conservative Government led by Margaret Thatcher, that prevented local councils from funding any materials and activities that ‘promoted homosexuality’ or the discussion of lesbian, gay, bisexual, or transgender (LGBT) issues (Greenland and Nunney 2008). Section 28 was repealed in 2003, and more recent legislation ensures the protection of lesbian, gay, and bisexual citizens. However, experiences of marginalisation and discrimination in the UK are still rife; the recent UK National LGBT Survey shows that over two thirds of all sexual minority respondents avoid being open about their sexual orientation for fear of a negative reaction, and 40% of respondents have experienced an incident in the past year because of their sexual orientation (Office 2018).

In this historical and current social context, older sexual minority **women** have experienced multiple interlocking systems of oppression (Collins 2000) that have shaped their current health and ageing outcomes. Experiences of discrimination and oppression are associated with mental health problems among LGBQ populations (Meyer 2003), and several US studies document the poorer physical and mental health of older sexual minority women when compared to their heterosexual counterparts (Addiset *al.* 2009, Fredriksen-Goldsen *et al.* 2013, Seelman 2018). Although these associations have not been formally examined in quantitative, population-based health studies in the UK, one would expect that the multiple life course exposure to experiences of otherness, marginalisation, and exclusion experienced by older sexual minority women will be reflected in health and socioeconomic inequalities when compared to older heterosexual women.

Although the exposure to social injustices over the life course is hypothesised to result in differential embodiment of ageing processes among UK older sexual minority women when compared to their heterosexual counterparts, it is important to also take into account the positive and health-protecting resources that sexual minority women have access to when examining their health and aging processes. As argued in the Health Equity Promotion Model (Fredriksen-Goldsen, Simoni, Kim, Lehavot, Walters, Yang and Hoy-Ellis 2014), considering only a deficit-driven model to explain the health and ageing of sexual minority older populations disregards their social and emotional resources, which may buffer against the detrimental effects of marginalisation and exclusion. This study is therefore also framed around a narrative of celebration, agency, and autonomy (King 2016), which acknowledges the role of the socioemotional resources of older sexual minority women in their reaching later life with greater resilience, more self-reliance, and stronger social networks than older heterosexual women (Fredriksen-Goldsen, Simoni, Kim, Lehavot, Walters, Yang and Hoy-Ellis 2014, King 2016).

This means, that, as has indeed been found in some US studies (de Vries and Hoctel 2006, Deevey 1990, Gonzales and Henning-Smith 2015, McParland and Camic 2016, Seelman 2018), older sexual minority women may show an advantage in terms of psychosocial indicators when compared to older heterosexual women.

Study Aims

This study aims to ascertain whether, and to what extent, there are health inequalities across sexual orientation groups in the UK by analyzing population-level data on the physical and mental health of older sexual minority and heterosexual women. Given the importance of understanding the mechanisms behind health inequalities, the present study also examines the underlying social inequalities to identify key social determinants of the health of older women across sexual orientation.

Design and Methods

This study uses data from the UK Household Longitudinal Study (UKHLS, also known as Understanding Society), a longitudinal household panel survey of approximately 40,000 households (University of Essex. Institute for Social and Economic Research 2018). The UKHLS provides longitudinal data on factors such as health, education, income, and social life (Knies 2014). For each wave, responses were collected over a 24-month period with face-to-face and self-completion computer-aided personal interviews. The first wave of the survey was carried out in 2009 to 2010. This study uses complete data from women aged 50 and older who were active in waves 3 (2011-2012) and 7 (2015-2016) (n=8209).

Sexual Orientation

Data on sexual orientation was asked to adult respondents (aged 22 and older) in wave 3 with the following question: “Which of the following options best describes how you think of yourself?” Response categories were: heterosexual or straight; gay or lesbian; bisexual; other; prefer not to say; don’t know; and refused. Sexual minority women were identified as those who reported a sexuality other than heterosexual or straight (i.e., gay or lesbian, bisexual, and other). A separate category identifies women who chose ‘prefer not to say.’ Estimates for responses to ‘don’t know’ and ‘refused’ categories are not included in the analyses due to very small cell sizes.

Outcomes

Four measures were used to assess the health and health behaviours of older women: mental health, physical functioning, overall self-rated health, and harmful alcohol consumption. All health outcomes were collected in wave 7.

Mental health was assessed with the 12-Item Short Form Health Survey Mental Component Summary (SF-12 MCS), a measure of nonspecific psychological distress that consists of 12 questions relating to the respondent’s self-reported general health, health limitations, emotional problems, pain, feelings of depression, and how they interfere with social activities (Ware, Kosinski and Keller 1996). Physical functioning was measured with the Short-Form Physical Health Composite Scale scores (SF-12 PCS). The SF-12 PCS assesses an individual’s self-reported, overall perceived physical functioning and physical health (Ware, Kosinski and Keller 1996). SF-12 MCS and PCS scores range from 0 (low functioning) to 100 (high functioning), with higher values indicating better mental and physical health. Both scales use norm-based scoring to have a mean of 50 and a Standard Deviation of 10.

Overall self-rated health was measured with a question that asked respondents to rate their health into five response categories ranging from excellent to poor. Response categories were dichotomised into "good, very good, or excellent" and "fair or poor" general health.

The AUDIT-C, a 3-item alcohol screen that identifies people who are hazardous drinkers or have active alcohol use disorders (Bushet *al.* 1998), was used to measure harmful alcohol use. The AUDIT-C is scored on a scale of 0-12, where scores of 0 reflect no alcohol use. In women, a score of 3 or more is considered positive, and in this analysis this cut-off was used to assess harmful alcohol drinking.

Covariates

Factors thought to be associated with health and sexual orientation were considered in analytical models. These **include** marital status (single; married, partnered, or cohabiting; or divorced, widowed, or separated), highest educational qualification (degree or above; O-level, A-level, or equivalent; other qualification; or no qualification), monthly income; economic activity (in employment; unemployed; retired; other), socioeconomic position of last job following the NS-SEC classification (management and professional; intermediate; small employers and own account; lower supervisory and technical; semi-routine and routine; or unemployed), and place of residence (urban or rural area). All covariates were collected in wave 7.

Age was included as a continuous variable, and includes participants who were 50 years of age and older at time of interview. Models also control for age squared to account for potential non-linear age effects. Gerontological research often distinguishes between the 'young-old' (50-64 years), the 'old' (65-74 years) and the 'old-old' (75+ years). Although there are differences in the ways these three groups will have experienced power relations and systems of oppression due to

their gender and sexual orientation, the small sample sizes in the UKHLS precludes any disaggregation into these categories for meaningful analytical purposes.

Statistical Analysis

Bivariate analyses examined health outcomes and explanatory factors by sexual orientation to provide descriptive statistics on the health and socioeconomic inequalities of older women.

Regression analyses explored the association between sexual orientation and the four measures of health (mental health, physical health, general self-rated health, and harmful alcohol use).

Models were built sequentially in order to explore the contribution of socioeconomic factors to health inequalities among sexual minority older women. The baseline model (Model 1), examined the unadjusted association between the different health outcomes and sexual orientation. Model 2 examined health inequalities across sexual orientation adjusted for age and aged squared. Model 3 further adjusted for marital status and area of residence, and the final model (Model 4), additionally adjusted for socioeconomic characteristics (education, income, economic activity, socioeconomic position). All models used heterosexual women as the reference category.

Data were analysed using the svy commands in Stata version 13 (StataCorp 2013). All analyses were based on complete cases and were weighted to take account of the stratified and clustered sample design, and the unequal probability of being sampled.

Results

Two percent of the sample identified as gay/lesbian, bisexual, or other (n=136), and three percent preferred not to disclose their sexual orientation (n=193). The large majority of women (95%) self-identified as heterosexual. Sexual minority women were younger, had a higher level of formal education, higher income, and higher socioeconomic position than their counterparts (see

Table 1). Women who preferred not to disclose their sexual orientation were older, more likely to be divorced, and had lower income and lower educational qualifications than heterosexual or sexual minority women.

Analyses of health inequalities presented in Tables 2 and 3 show that across physical and mental health outcomes, women who did not disclose their sexual orientation had worse health than heterosexual women and sexual minority women (see Model 1, Tables 2 and 3). Upon adjustment for covariates in Models 2 to 4 these associations attenuated, although the differences between women who preferred not to disclose their sexuality and heterosexual women remained strong and statistically significant across mental and physical health outcomes (β : -1.61, 95% C.I.: -3.21, -0.02 for mental health, and β : -2.18, 95% C.I.: -4.02, -0.35 for physical health). Women who self-identified as gay/lesbian/bisexual had higher odds of harmful alcohol use than heterosexual women. This association reduced slightly after adjusting for age, age squared, marital status, and area of residence in Models 2 and 3, but due to the higher socioeconomic circumstances of sexual minority women, gained strength in Model 4 after adjusting for education, monthly income, economic activity, and socioeconomic position (O.R.: 1.74, 95% C.I.: 1.09, 2.79; Table 3).

Discussion and Implications

This study set out to examine inequalities in health and social circumstances among older sexual minority women, and women who preferred not to disclose their sexuality, compared to older heterosexual women. It aimed to contribute to the literature by examining two under-researched populations in UK gerontology – sexual minority women, and women who prefer not to disclose their sexual orientation – and explore their health and social circumstances as they reach older age. Findings show that sexual minority women aged 50 and over are on average younger and

have higher socioeconomic resources (in terms of education, income, and occupational status) than their heterosexual peers. In contrast, older women who prefer not to disclose their sexual orientation are older and have the lowest income and educational qualifications of all sexual orientation groups. These findings echo what has been previously reported in other UK social surveys in terms of the socioeconomic position of older LGBTQ groups. Results from the 2007 Citizenship Survey show that the gay and lesbian population in England and Wales are more likely than their heterosexual peers to be educated to degree level or above, and on average have higher income (Aspinall 2009). Similarly, a survey of over 2,000 heterosexual, lesbian, gay, and bisexual individuals over the age of 55 found that older LGB people are over-represented in managerial and professional occupational groups (Guasp 2011). Although less has been reported on the social circumstances of older people who choose not to disclose their sexuality, a study using GP records in England found that older patients were more likely than younger patients to leave the question on sexual orientation unanswered (Elliott, Kanouse, Burkhardt, Abel, Lyratzopoulos, Beckett, Schuster and Roland 2014), which reflects this study's finding that women who prefer not to disclose their sexuality are older than both sexual minority and heterosexual women. Although none of these three reports focused specifically on women, they provide support for this study's finding that sexual minority women – much like the larger LGBTQ older population – have on average higher socioeconomic resources compared to both older heterosexual women, and women who prefer not to disclose their sexual orientation.

These patterns of socioeconomic differences across sexual orientation groups are reflected in findings from the health inequalities analyses – there is no evidence of inequalities in physical and mental health between sexual minority and heterosexual older women, but results show that older women who prefer not to disclose their sexuality have worse mental and physical health

than both older heterosexual women and sexual minority women. Findings regarding the absence of physical and mental health inequalities between sexual minority and heterosexual older women contradict what is reported in the international literature, which reports that compared to older heterosexual women, older sexual minority women report poorer mental health (Fredriksen-Goldsen, Kim, Barkan, Muraco and Hoy-Ellis 2013, Gonzales and Henning-Smith 2015, Wallace *et al.* 2011), cognitive health (Seelman 2018), functional health (Fredriksen-Goldsen, Kim, Barkan, Muraco and Hoy-Ellis 2013, Gonzales and Henning-Smith 2015, Seelman 2018), and a higher risk of cardiovascular disease and obesity (Addis, Davies, Greene, MacBride-Stewart and Shepherd 2009, Fredriksen-Goldsen, Kim, Barkan, Muraco and Hoy-Ellis 2013) than older heterosexual women. UK studies using the same dataset analysed here (the UKHLS) but not restricting their analyses to older women, do report clear health inequalities by sexual orientation, whereby bisexual, gay, and lesbian male and female respondents report poorer health than heterosexual people (Booker, Rieger and Unger 2017). The study by Booker and colleagues (2017) did not stratify by age or gender, but was able to disaggregate into more specific sexual orientation groups, and found that bisexual respondents have worse health than both heterosexual and gay and lesbian respondents (Booker, Rieger and Unger 2017). The present analyses have not been able to disaggregate sexual orientation groups due to sample size restrictions, and it is likely that inequalities in health are being concealed by grouping together women who self-report their sexual orientation as lesbian, bisexual, and other. Descriptive statistics presented in Figure 1 do show a higher percentage of reports of fair or poor self-rated health by older women who self-report their sexual orientation as 'other' compared to older women who self-report their sexual orientation as gay/lesbian, or bisexual, indicating likely differences within older women who do not identify as heterosexual. It is also possible that

inequalities in health among sexual minority and heterosexual women exist among the oldest old – the generation of sexual minority women who have endured the most pervasive experiences of oppression and marginalisation (Fredriksen-Goldsen and Muraco 2010). Given limited sample sizes, this study wasn't able to examine health inequalities across different age cohorts.

However, descriptive analyses provided in Figure 2 show the opposite – greater differences in the percentage reporting fair or poor self-rated health in the younger age cohorts. Unfortunately, due to data restrictions, the present analyses could not disaggregate age groups further to examine health inequalities by sexual orientation according to generation or specific age groups.

As discussed in the introduction, this study employs a theoretical approach that considers, alongside life course experience of oppression and marginalisation, the positive and health-protecting resources that older sexual minority women have, including increased social networks, resilience, and self-reliance, which can provide a buffering effect for sexual minority women as they reach older age (Fredriksen-Goldsen, Simoni, Kim, Lehavot, Walters, Yang and Hoy-Ellis 2014). It may be that these protective factors counteract the harm of oppression and marginalization on sexual minority women's health. There are two other studies that have found no differences in ageing-related outcomes across sexual orientation; a web-based study conducted in the UK found no significant differences in decline in cognitive functioning by sexual orientation among neither women nor men (Mayloret *al.* 2007), and a study of health behaviours among older men reported no differences in terms of exercise and diet between older gay men and heterosexual men (Slevin 2008). This is the first UK-based study to use population-level data to examine health inequalities across sexual orientation among older women, and additional research with larger samples of older sexual minority women should explore this finding further.

Although this study found that older sexual minority and heterosexual women have similar levels of physical and mental health, there was a clear inequality in the risk of harmful drinking – older sexual minority women are almost twice as likely as older heterosexual women to engage in harmful alcohol consumption. This is a well-documented finding in the international literature (Bryan, Kim and Fredriksen-Goldsen 2017, Fredriksen-Goldsen, Kim, Barkan, Muraco and Hoy-Ellis 2013, Guasp 2011, Hunt and Fish 2008, King, McKeown, Warner, Ramsay, Johnson, Cort, Wright, Blizard and Davidson 2003, Shahab, Brown, Hagger-Johnson, Michie, Semlyen, West and Meads 2017), and the mechanisms behind this finding have been well-hypothesised. Some studies suggest that the social network structures of LGBQ older women are likely to influence behaviour in unique ways, which may facilitate or encourage higher levels of alcohol consumption (Bryan, Kim and Fredriksen-Goldsen 2017, Trocki, Drabble and Midanik 2005). Others suggest that social norms and repercussions in relation to drinking norms differ for sexual minority women compared to heterosexual women, so that sexual minority women enjoy more tolerant and permissive norms toward alcohol use (Cochran, Grella and Mays 2012). Studies conducted among younger sexual minority women propose that increased alcohol consumption may be an expression of nonconforming with gender roles (Rosario, Schrimshaw and Hunter 2008), or it may reflect the fact that women are more likely to experience double discrimination, which may increase the risk of engaging in harmful health behaviours as a coping mechanism (Boweget *al.* 2003).

The strongest evidence of health inequalities across sexual orientation groups that this study provides is that shown between older women who prefer not to disclose their sexuality, and older heterosexual women. Across the mental and physical health outcomes examined, older women who did not disclose their sexuality had worse health than older heterosexual women and

older sexual minority women, but lower alcohol consumption than these two populations. This finding is to some extent similar to results reported by Booker and colleagues (2017), who used the UKHLS but did not restrict their analyses to older women, and found that people who prefer not to disclose their sexuality are healthier than gay/lesbian and bisexual respondents, but have poorer health than heterosexual respondents (Booker, Rieger and Unger 2017). It should be noted that the UKHLS asks only one question on sexuality, which is related to identity, but there is no information on behaviour or attraction. It is therefore not possible to discern from these analyses whether women who preferred not to say what their sexual orientation is are in fact older women who are 'in the closet,' older women who have not understood this question, or older women who simply prefer not to state what their sexuality is, without necessarily meaning that they are concealing a non-heterosexual sexuality. In any case, studies have shown that people who put themselves in this category in an anonymous survey are systematically different from the heterosexual population (Powdthavee and Wooden 2015), and so it is of interest to unpick these study results further. Should one assume the first scenario (that these are older women who prefer not to disclose a non-heterosexual sexuality), there are several explanations for this finding. A large body of literature has shown a negative association between sexual orientation concealment and worse mental health (Schrimshaw *et al.* 2013, Sedlovskaya *et al.* 2013), which could be due to the increased stress and hypervigilance that results from being preoccupied with the discovery of a stigmatised identity (Meyer 2003, Pachankis 2007). Relatedly, a body of work has evidenced the positive associations that exist between openly identifying as gay male or lesbian (being "out") and higher levels of self-esteem and life satisfaction, increased social support, and better adjustment to the aging process (Adelman 1990, D'Augelli and Grossman 2001, Grossman, D'Augelli and Hershberger 2000, Sharp 1997). These

findings reflect the hypotheses held by most studies that examine non-disclosure of sexuality, which propose that disclosure is inherently positive and non-disclosure is, in contrast, related to negative outcomes. This “disclosure imperative” suggests that being “out” is what LGBTQ populations should aspire to, but it ignores the potential risks of disclosure and the fact that for individuals who are single or partnered with someone of a different gender, disclosure of a non-heterosexual identity may feel irrelevant or uncomfortable (McLean 2007). Particularly for this cohort of older women who have lived most of their lives in contexts of multiple marginalisation, and have become accustomed to being ‘hidden’ (Traies 2016), non-disclosure of sexuality may be a consequence, and a marker, of life course experiences of oppression and discrimination.

This study has some limitations that should be acknowledged. First, as previously discussed, analyses had to combine women who self-report their sexual orientation as lesbian, bisexual, gay, and other into a ‘sexual minority’ group. Studies show differences between bisexuals and lesbians in terms of socioeconomic status and health, whereby bisexuals have poorer outcomes than both lesbians and heterosexuals (Simoniet *al.* 2017). Due to limited sample sizes, the present study had to combine several sexual minority identities into one, which is likely masking important within-group differences, as well as health inequalities between the different sexual minority women and heterosexual women. The UKHLS is the only UK survey at time of writing that contains a large enough sample of older sexual minority women to examine (although crudely) health inequalities by sexual orientation. Relatedly, another limitation of this study is in regards to its measure of sexual orientation. The UKHLS asks only one question, related to identity, and does not take into account other aspects of sexual orientation such as attraction and behaviour. This approach to measuring sexual orientation assumes that sexuality is stable over time, but studies have shown that sexual orientation may be fluid (Baumeister 2000).

Further, the use of only one question does not allow deeper exploration of the sexual orientation of respondents who have selected ‘other’ or ‘prefer not to say.’ In addition, the use of a binary gender variable and assumptions of stability do not allow for identification of transgender respondents in the UKHLS dataset. A final limitation related to data constraints is the impossibility to explore oppressions at the intersection of several marginalised social positions including ethnicity, sexuality, gender, and class, among others.

This study’s limitations regarding small sample sizes and measurement restrictions are common and concerning in the field of queer gerontology. Even in the US, where most of the research on LGBTQ ageing is taking place, there are few health-related studies that use population-based samples or directly compare older LGBTQ women to their same-age heterosexual peers (Seelman 2018). A recent editorial in *The Lancet* highlighted that LGBTIQ health data still suffers chronic omission from most health initiatives, and suggested that this needs to be rectified (Lancet 2019). Future population-level data collection efforts in the UK should ensure, as a matter of social justice, that samples are inclusive of LGBTQ populations, and that they contain adequate measures of sexual orientation and gender identity. This includes asking participants about sexual orientation, identity, and behaviours; ensuring that sample sizes are big enough to conduct robust analyses to examine the circumstances of older LGBTQ people; and capturing relevant constructs to understand the underlying mechanisms behind health inequalities in later life across sexual orientation.

Conclusion

This is the first UK study to analyze population-level data on the health and social circumstances of older sexual minority women, heterosexual women, and women who prefer not to disclose their sexuality, in order to ascertain whether, and to what extent, there are health and social

inequalities across sexual orientation groups in the UK. Findings on the increased risk of alcohol consumption by older sexual minority women have grave implications. The health and health needs of older sexual minority women are one of the most neglected practice and research areas in UK health and health care (Hunt and Minsky 2006), and research suggests that sexual minority women do not respond to preventive health care messages, and do not seek intervention or support from the health sector (Hunt and Minsky 2006). Understanding their social and health circumstances is key in order to ensure appropriate and equitable services for older LGBTQ populations.

This study highlights the general health and social disadvantage experienced by older women who prefer not to disclose their sexuality. In order to further understand the characteristics and health needs of women who choose not to self-report their sexual orientation, and identify drivers of healthy ageing for this population, studies must include suitable sampling designs with sufficiently large samples of older women and comprehensive measures of sexual orientation, identity, and behaviour.

References

- Addis, S., Davies, M., Greene, G., MacBride-Stewart, S. and Shepherd, M. 2009. The health, social care and housing needs of lesbian, gay, bisexual and transgender older people: a review of the literature. *Health and Social Care in the Community*, **17**, 6, 647-658.
- Adelman, M. 1990. Stigma, Gay Lifestyles, and Adjustment to Aging: A Study of Later-Life Gay Men and Lesbians 1990;20(3/4):7–32. *Journal of Homosexuality*, **20**, 7-32.
- Aspinall, P. 2009. Estimating the size and composition of the lesbian, gay and bisexual population in Britain, Research Report 37. . In Equality and Human Rights Commission, Manchester.
- Baumeister, R. 2000. Gender differences in erotic plasticity: the female sex drive as socially flexible and responsive. *Psychological Bulletin*, **126**, 3, 347-374.
- Booker, C., Rieger, G. and Unger, J. 2017. Sexual orientation health inequality: Evidence from Understanding Society, the UK Longitudinal Household Study. *Preventive Medicine*, **101**, 126-132.
- Bowleg, L. 2012. The problem with the phrase “women and minorities”: Intersectionality, an important theoretical framework for public health. *American Journal of Public Health*, **102**, 1267–1273.
- Bowleg, L., Huang, J., Brooks, K., Black, A. and Burkholder, G. 2003. Triple jeopardy and beyond: multiple minority stress and resilience among black lesbians. *Journal of Lesbian Studies*, **7**, 4, 87-108.
- Bryan, A., Kim, H.-J. and Fredriksen-Goldsen, K. 2017. Factors Associated With High-Risk Alcohol Consumption Among LGB Older Adults: The Roles of Gender, Social Support, Perceived Stress, Discrimination, and Stigma *The Gerontologist*, **57**, S95–S104.

- Bush, K., Kivlahan, D., McDonell, M., Fihn, S. and Bradley, K. 1998. The AUDIT Alcohol consumption Questions (AUDIT-C): An effective brief screening test for problem drinking. *Archives of Internal Medicine*, **3**, 1789-1795.
- Cochran, S., Drescher, J., Kismödi, E., Giami, A., García-Moreno, C., Atalla, E., Marais, A., Meloni Vieira, E. and Reed, G. 2014. Proposed declassification of disease categories related to sexual orientation in the International Statistical Classification of Diseases and Related Health Problems (ICD-11). *Bulletin of the World Health Organization*, **92**, 9, 672-679.
- Cochran, S., Grella, C. and Mays, V. 2012. Do substance use norms and perceived drug availability mediate sexual orientation differences in patterns of substance use? Results from the California Quality of Life Survey II. *Journal of Studies on Alcohol and Drugs*, **73**, 4, 675-685.
- Collins, P. 2000. *Black feminist thought: Knowledge, consciousness, and the politics of empowerment*. Routledge, New York.
- Crenshaw, K. 1993. Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, **43**, 1241-1299.
- D'Augelli, A. and Grossman, A. 2001. Disclosure of Sexual Orientation, Victimization, and Mental Health Among Lesbian, Gay, and Bisexual Older Adults. *Journal of Interpersonal Violence*, **16**, 1008–1027.
- Dannefer, D. 2003. Cumulative advantage/disadvantage and the life course: Cross-fertilizing age and social science theory. *Journal of Gerontology*, **58**, S327-S337.
- de Vries, B. and Hootel, P. 2006. The family-friends of older gay men and lesbians. In N., T. and G., H. (eds), *Sexual inequalities and social justice* University of California Press, Berkeley, CA, 213–232.

- Deevey, S. 1990. Older lesbian women: An invisible minority. *Journal of Gerontological Nursing*, **16**, 35-39.
- Elder, G. 1994. Time, human agency, and social change: Perspectives on the life course. *Social Psychology Quarterly*, **57**, 4-15.
- Elliott, M., Kanouse, D., Burkhart, Q., Abel, G., Lyratzopoulos, G., Beckett, M., Schuster, M. and Roland, M. 2014. Sexual minorities in England have poorer health and worse health care experiences: a national survey. *Journal of General Internal Medicine*, **30**, 1, 9-16.
- Fish, J. and Anthony, D. 2005. UK National Lesbians and Health Care Survey. *Women & Health*, **41**, 3, 27-45.
- Fredriksen-Goldsen, K., Kim, H.-J., Barkan, S., Muraco, A. and Hoy-Ellis, C. 2013. Health disparities among lesbian, gay, and bisexual older adults: Results from a population-based study *American Journal of Public Health*, **103**, 10, 1802-1809.
- Fredriksen-Goldsen, K. and Muraco, A. 2010. Aging and sexual orientation: A 25-Year review of the literature. *Research on Aging*, **32**, 3, 372-413.
- Fredriksen-Goldsen, K., Simoni, J., Kim, H., Lehavot, K., Walters, K., Yang, J. and Hoy-Ellis, C. 2014. The health equity promotion model: Reconceptualization of lesbian, gay, bisexual, and transgender (LGBT) health disparities. *The American Journal of Orthopsychiatry*, **84**, 6, 653-663.
- Gonzales, G. and Henning-Smith, C. 2015. Disparities in Health and Disability Among Older Adults in Same-Sex Cohabiting Relationships. *Journal of Aging and Health*, **27**, 3, 432-453.
- Greenland, K. and Nunney, R. 2008. The repeal of Section 28: it ain't over 'til it's over. *Pastoral Care in Education*, **26**, 4, 243-251.

- Grossman, A., D'Augelli, A. and Hershberger, S. 2000. Social Support Networks of Lesbian, Gay, and Bisexual Adults 60 Years of Age and Older. *Journal of Gerontology: Psychological Sciences*, **55**, 3, 171-179.
- Guasp, A. 2011. Lesbian, Gay and Bisexual People later in life. In Stonewall, London.
- Hagger-Johnson, G., Taibjee, R., Semlyen, J., Fitchie, I., Fish, J., Meads, C. and Varney, J. 2013. Sexual orientation identity in relation to smoking history and alcohol use at age 18/19: cross-sectional associations from the Longitudinal Study of Young People in England (LSYPE). *BMJ Open*, **3**, e002810.
- Hatzenbuehler, M. 2009. How does sexual minority stigma "get under the skin"? A psychological mediation framework. *Psychological bulletin*, **135**, 5, 707-730.
- Hunt, R. and Fish, J. 2008. Prescription for change: Lesbian and bisexual women's health check 2008. In Stonewall, London.
- Hunt, R. and Minsky, A. 2006. Reducing health inequalities for Lesbian Gay and Bisexual people: Evidence of health care needs. In Stonewall and Department of Health, London.
- Kehoe, M. 1986. Lesbians Over 65. *Journal of Homosexuality*, **12**, 3-4, 139-152.
- King, M. 2016. *Older Lesbian, Gay and Bisexual Adults: Identities, intersections and institutions*. Routledge, Abingdon.
- King, M., McKeown, E., Warner, J., Ramsay, A., Johnson, K., Cort, C., Wright, L., Blizzard, R. and Davidson, O. 2003. Mental health and quality of life of gay men and lesbians in England and Wales: Controlled, cross-sectional study. *British Journal of Psychiatry*, **183**, 6, 552-558.
- King, M. and Nazareth, I. 2006. The health of people classified as lesbian, gay and bisexual attending family practitioners in London: a controlled study. *BMC Public Health*, **6**, 127.

- Knies, G. 2014. Understanding Society – The UK Household Longitudinal Study: Waves 1-4, 2009-2013, User Manual. In Institute for Social and Economic Research, University of Essex, Colchester, UK.
- Lancet. 2019. Editorial: Advancing LGBTIQ rights. *The Lancet*, **389**, 2164.
- Lewis, R., Derlega, V., Griffin, J. and Krowinski, A. 2003. Stressors for gay men and lesbians: Life stress, gay-related stress, stigma consciousness, and depressive symptoms. *Journal of Social and Clinical Psychology*, **22**, 716–729.
- Maylor, E., Reimers, S., Choi, J., Collaer, M., Peters, M. and Silverman, I. 2007. Gender and Sexual Orientation Differences in Cognition Across Adulthood: Age Is Kinder to Women Than to Men Regardless of Sexual Orientation. . *Archives of Sexual Behavior*, **36**, 235–249.
- McCall, L. 2005. The Complexity of Intersectionality. *Signs*, **30**, 3, 1771-1800.
- McLean, K. 2007. Hiding in the closet?: Bisexuals, coming out and the disclosure imperative. *Journal of Sociology*, **43**, 2, 151–166.
- McParland, J. and Camic, P. 2016. Psychosocial factors and ageing in older lesbian, gay and bisexual people: a systematic review of the literature. *Journal of Clinical Nursing*, **25**, 3415-3437.
- Mercer, C., Bailey, J., Johnson, A., Erens, B., Wellings, K., Fenton, K. and Copas, A. 2007. Women who report having sex with women: British national probability data on prevalence, sexual behaviors, and health outcomes. *American Journal of Public Health*, **97**, 6, 1126-1133.
- Meyer, I. 2003. Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, **129**, 674–697.
- Office, G.E. 2018. National LGBT Survey. The Research Report. In Government Equalities Office, Manchester, UK.

- Pachankis, J. 2007. The psychological implications of concealing a stigma: a cognitive-affective-behavioral model. *Psychological Bulletin*, **133**, 2, 328-345.
- Powdthavee, N. and Wooden, M. 2015. Life satisfaction and sexual minorities: Evidence from Australia and the United Kingdom. *Journal of Economic Behavior & Organization*, **116**, 107-126.
- Rosario, M., Schrimshaw, E. and Hunter, J. 2008. Butch/Femme Differences in Substance Use and Abuse Among Young Lesbian and Bisexual Women: Examination and Potential Explanations. *Substance Use & Misuse*, **43**, 1002-1015.
- Schrimshaw, E., Siegel, K., Downing, M. and Parsons, J. 2013. Disclosure and concealment of sexual orientation and the mental health of non-gay-identified, behaviorally bisexual men. *Journal of Consulting and Clinical Psychology*, **81**, 141-153.
- Sedlovskaya, A., Purdie-Vaughns, V., Eibach, R., LaFrance, M., Romero-Canyas, R. and Camp, N. 2013. Internalizing the closet: concealment heightens the cognitive distinction between public and private selves. *Journal of Personality and Social Psychology*, **104**, 4, 695-715.
- Seelman, K. 2018. Differences in Mental, Cognitive, and Functional Health by Sexual Orientation Among Older Women: Analysis of the 2015 Behavioral Risk Factor Surveillance System. *The Gerontologist*, **gnx215**.
- Semlyen, J., Curtis, T. and Varney, J. 2019. Sexual orientation identity in relation to unhealthy Body Mass Index (BMI): Individual Participant Meta-Analysis of 93,429 individuals from 12 UK health surveys. *Journal of Public Health*, **fdy224**.
- Semlyen, J., King, M., Varney, J. and Hagger-Johnson, G. 2016. Sexual orientation and symptoms of common mental disorder or low wellbeing: combined meta-analysis of 12 UK population health surveys. *BMC Psychiatry*, **16**, 67.

- Shahab, L., Brown, J., Hagger-Johnson, G., Michie, S., Semlyen, J., West, R. and Meads, C. 2017. Sexual orientation identity and tobacco and hazardous alcohol use: findings from a cross-sectional English population survey. *BMJ Open*, **7**, e015058.
- Sharp, C. 1997. Lesbianism and Later Life in an Australian Sample: How Does Development of One Affect Anticipation of the Other? *Journal of Gay, Lesbian, and Bisexual Identity*, **2**, 247-263.
- Simoni, J., Smith, L., Oost, K., Lehavot, L. and Fredriksen-Goldsen, K. 2017. Disparities in Physical Health Conditions Among Lesbian and Bisexual Women: A Systematic Review of Population-Based Studies. *Journal of Homosexuality*, **64**, 32-44.
- Slevin, K. 2008. Disciplining Bodies: The Aging Experiences of Older Heterosexual and Gay Men. *Generations*, **32**, 36-42.
- StataCorp. 2013. Stata Statistical Software: Release 13. In StataCorp LP, College Station, TX.
- Traies, J. 2015. Old lesbians in the UK: Community and friendship. *Journal of Lesbian Studies*, **19**, 1, 35-49.
- Traies, J. 2016. *The lives of older lesbians: Sexuality, identity and the life course*. Palgrave Macmillan, Basingstoke.
- Trocki, K., Drabble, L. and Midanik, L. 2005. Use of heavier drinking contexts among heterosexuals, homosexuals and bisexuals: results from a National Household Probability Survey. *Journal of Studies on Alcohol and Drugs*, **66**, 105-110.
- University of Essex. Institute for Social and Economic Research, N.S.R., Kantar Public. 2018. Understanding Society: Waves 1-8, 2009-2017 and Harmonised BHPS: Waves 1-18, 1991-2009. 11th Edition. In Service, U.D. (ed).

- Wallace, S., Cochran, S., Durazo, E. and Ford, C. 2011. The Health of Aging Lesbian, Gay and Bisexual Adults in California. *Policy Brief UCLA Centre for Health Policy Research*, **0**, 1-8.
- Ware, J., Kosinski, M. and Keller, S. 1996. A 12-item short-form health survey: A construction of scales and preliminary tests of reliability and validity. *Medical Care*, **34**, 220–233.
- Wright, E. and Perry, B. 2006. Sexual identity distress, social support, and the health of gay, lesbian, and bisexual youth. *Journal of Homosexuality*, **51**, 81–110.

Table 1. Summary statistics by sexual orientation of women aged 50 and older in Understanding Society wave 7 (2015-2016)

	Heterosexual	Sexual minority (gay/lesbian/ bisexual/other)	Prefer not to say	Total sample
<i>Weighted n</i>	(n=6221)	(n=136)	(n=193)	(N=6550)
<i>Unweighted n</i>	(n=7779)	(n=168)	(n=262)	(N=8209)
Age, M(SD)	65.3 (10.11)	62.6 (10.80)	68.1 (10.72)	65.7 (10.32)
Marital status, % (SE)				
Single	6.6 (0.4)	19.7 (3.8)	10.1 (2.3)	7.0 (0.4)
Married/partnered/cohabiting	61.2 (0.7)	61.3 (4.4)	48.0 (3.8)	60.8 (0.6)
Divorced/widowed/separated	32.2 (0.6)	19.0 (3.7)	41.9 (3.9)	32.2 (0.6)
Highest educational qualification, % (SE)				
Degree or above	33.6 (0.6)	37.8 (4.5)	23.5 (3.2)	33.4 (0.6)
O-level, A-level, GCSE or similar	32.5 (0.6)	21.8 (3.7)	28.5 (3.3)	32.1 (0.6)
Other qualification	14.3 (0.5)	18.5 (3.6)	12.9 (2.6)	14.3 (0.5)
No qualification	19.7 (0.5)	21.9 (3.9)	35.0 (3.7)	20.2 (0.6)
Monthly income, M(SD)	1427.9 (1162.31)	1586.2 (1380.79)	1171.4 (754.88)	1403.4 (1155.74)
Economic activity, % (SE)				
In employment	36.7 (0.6)	45.1 (4.7)	28.8 (3.2)	36.7 (0.6)
Unemployed	8.4 (0.4)	13.7 (3.1)	7.9 (2.1)	8.4 (0.4)
Retired	54.4 (0.7)	41.2 (4.5)	62.8 (3.6)	54.4 (0.6)
Other economically inactive	0.5 (0.1)	0.0 (0.0)	0.5 (0.5)	0.5 (0.1)
Socioeconomic position, % (SE)				
Management and professional	15.0 (0.4)	22.4 (3.8)	6.9 (1.9)	14.8 (0.4)
Intermediate	6.8 (0.3)	6.8 (2.2)	4.4 (1.5)	6.7 (0.3)
Small employers and own account	3.8 (0.2)	6.8 (2.0)	2.2 (1.0)	3.8 (0.2)
Lower supervisory and technical	1.7 (0.2)	4.1 (1.7)	2.6 (1.0)	1.8 (0.2)
Semi-routine and routine	9.9 (0.4)	7.3 (2.6)	12.9 (2.5)	10.0 (0.4)
Unemployed	62.8 (0.6)	52.6 (4.7)	71.0 (3.2)	62.9 (0.6)
Place of residence, % (SE)				
Urban area	71.7 (0.7)	80.0 (3.8)	78.0 (2.9)	72.1 (0.7)
Rural area	28.3 (0.7)	20.0 (3.8)	22.0 (2.9)	27.9 (0.7)
Mental health (SF-MCS), M(SD)	49.9 (9.64)	49.2 (9.63)	48.2 (10.06)	49.9 (9.74)
Physical functioning (SF-PCS), M(SD)	45.6 (12.22)	46.6 (11.31)	41.6 (12.36)	45.1 (12.33)
General fair/poor self-rated health, % (SE)	27.7 (0.6)	22.0 (3.8)	35.9 (3.7)	27.8 (0.6)
Harmful alcohol use (AUDIT-C), % (SE)	59.0 (0.7)	71.6 (4.8)	52.4 (4.7)	59.2 (0.7)

Table 2. Mental and physical health of older sexual minority women, and women who prefer not to disclose their sexual orientation, compared to that of older heterosexual women, in Understanding Society wave 7 (2015-2016)

	Model 1	Model 2	Model 3	Model 4
	β (95% CI)	β (95% CI)	β (95% CI)	β (95% CI)
Mental health (SF-MCS)				
Heterosexual	Reference	Reference	Reference	Reference
Sexual minority	-0.76 (-2.52, 1.01)	-0.18 (-2.04, 1.67)	-0.12 (-1.96, 1.73)	0.01 (-1.74, 1.77)
Prefer not to say	-1.72* (-3.38, -0.06)	-2.05* (-3.68, -0.42)	-1.72* (-3.36, -0.08)	-1.61* (-3.21, -0.02)
Physical health (SF-PCS)				
Heterosexual	Reference	Reference	Reference	Reference
Sexual minority	1.06 (-0.99, 3.11)	0.40 (-1.44, 2.24)	0.32 (-1.55, 2.19)	0.58 (-1.23, 2.38)
Prefer not to say	-3.96† (-5.90, -2.01)	-3.00** (-4.88, -1.12)	-2.65** (-4.52, -0.79)	-2.18* (-4.02, -0.35)

† $p < 0.001$, ** $p < 0.01$, * $p < 0.05$; Model 1 is unadjusted; Model 2 adjusts for age and age squared; Model 3 adjusts for age, age squared, marital status, and area of residence; Model 4 additionally adjusts for highest educational qualification, monthly income, economic activity, and socioeconomic position of last job.

Table 3. Self-rated health and harmful alcohol use of older sexual minority women, and women who prefer not to disclose their sexual orientation, compared to that of older heterosexual women, in Understanding Society wave 7 (2015-2016)

	Model 1	Model 2	Model 3	Model 4
	O.R. (95% CI)	O.R. (95% CI)	O.R. (95% CI)	O.R. (95% CI)
Fair/Poor general self-rated health				
Heterosexual	Reference	Reference	Reference	Reference
Sexual minority	0.74 (0.48 - 1.14)	0.76 (0.50, 1.16)	0.75 (0.49, 1.14)	0.65 (0.42, 1.02)
Prefer not to say	1.46* (1.06 - 2.02)	1.37 (0.99, 1.90)	1.29 (0.92, 1.79)	1.19 (0.84, 1.69)
Harmful alcohol use (AUDIT-C)				
Heterosexual	Reference	Reference	Reference	Reference
Sexual minority	1.74* (1.10 - 2.77)	1.66* (1.03, 2.66)	1.70* (1.06, 2.73)	1.74* (1.09, 2.79)
Prefer not to say	0.76 (0.52 - 1.11)	0.84 (0.57, 1.23)	0.89 (0.61, 1.31)	0.91 (0.62, 1.35)

† $p < 0.001$, ** $p < 0.01$, * $p < 0.05$; Model 1 is unadjusted; Model 2 adjusts for age and age squared; Model 3 adjusts for age, age squared, marital status, and area of residence; Model 4 additionally adjusts for highest educational qualification, monthly income, economic activity, and socioeconomic position of last job.

Figure 1. Reports of fair or poor self-rated health by sexual orientation among older women in Understanding Society (n=8,209)

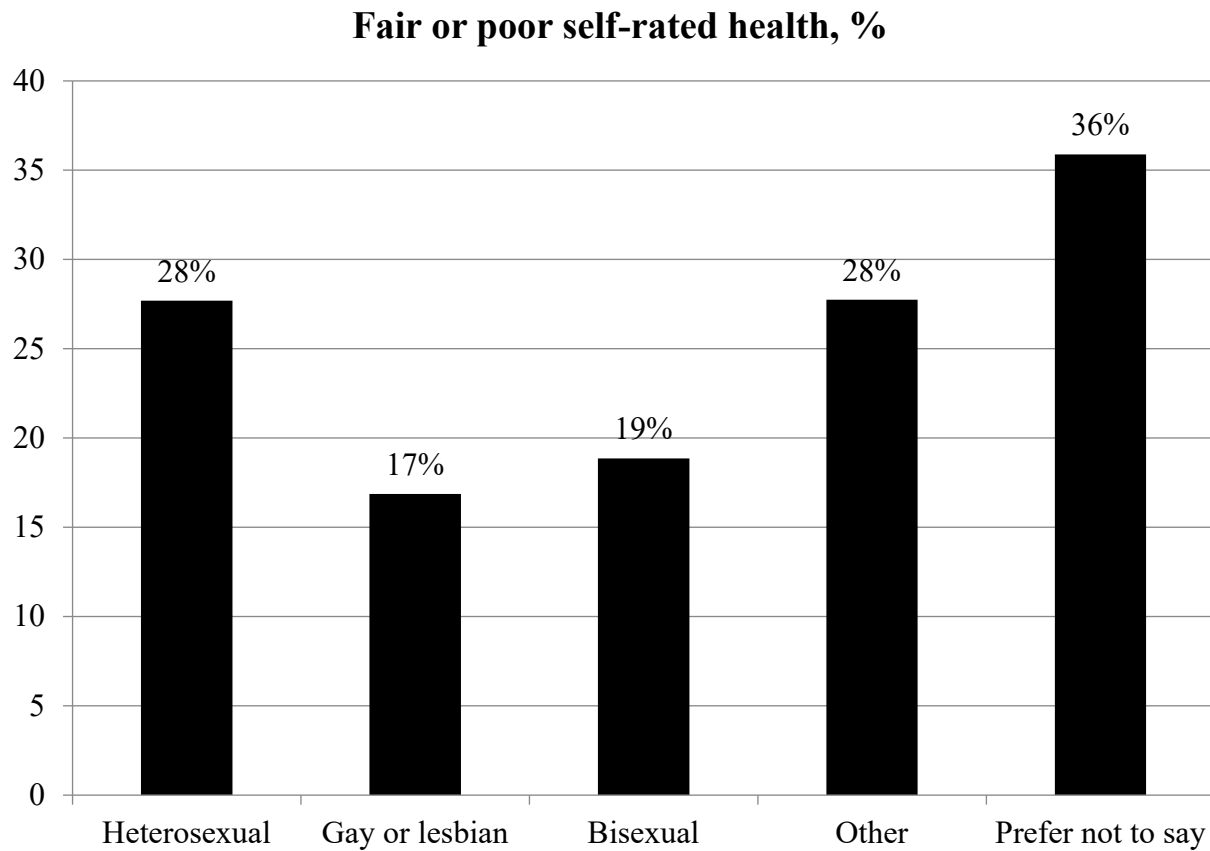


Figure 2. Reports of fair or poor self-rated health by sexual orientation and age among older women in Understanding Society (n=8209)

